

REMARKS

Claims 1 and 4-15 are pending.

**I. Interview Summary:**

This Response is submitted herewith in light of the Examiner Interview of March 22, 2007. Applicant is thankful of Examiner's helpful insights and general assistance. During the Interview, discussion ensued around the claims as presently amended and descriptions in the specification relating to same. While agreement was not officially reached, it was understood that a new search would be necessary due to the present claim amendments relating to dosing.

**II. Rejection under 35 U.S.C. §112, 1<sup>st</sup> Paragraph:**

The pending claims are rejected under §112, 1<sup>st</sup> paragraph, as allegedly containing subject matter not adequately described in the specification. Applicant respectfully disagrees and, for the reasons stated below, requests the withdrawal of the §112 rejection.

Examiner states that the subject matter as claimed consists of "a method of treating a patient with certain cancers to reduce symptoms of GvHD by using beclomethasone-17, 21-dipropionate alone or in combination with prednisone." (Paper mailed 1/5/07, page 4) However, Applicant respectfully submits the claims are not drawn to a method of treating a patient by reducing GvHD symptoms, as alleged by Examiner. Instead, the claims are drawn to a

method of treating specific cancer of the blood by a specific dosing regimen of beclomethasone-17, 21-dipropionate ("BDP") wherein the dosing is capable of maintaining a specific reaction and eliminating or reducing the number of cancer cells in the blood. Nothing is mentioned regarding the limitation of reducing GvHD symptoms, as stated by Examiner.

There is ample support throughout the specification for the present amendments to the claims. At paragraph [0003], page 1, there is a list of blood cancers treatable by bone marrow transplant, as well as a description of the curative properties of bone marrow transplant that are derived from the graft-versus-leukemia effect. At paragraph [0022], page 8, there is a description of the two dose delivery and the support for the rationale behind same.

In light of the above clarifying remarks and the present amendments to the claims, Applicant respectfully requests Examiner withdraw the §112 rejection.

**III. Double Patenting rejection:**

Examiner has rejected the pending claims under obviousness-type double patenting as being unpatentable over US Patent No. 6,096,731 ("731"). Examiner's reasoning behind this rejection is based on the premise that both the '731 patent and the claims of the present invention are claiming a method of treating a patient to reduce symptoms of GVHD by using BDP. Applicant respectfully disagrees

with Examiner's interpretation of the claimed requirements from claim 1 of the '731 patent, which reads:

1. A method for preventing tissue damage associated with graft-versus-host disease in a patient having undergone hematopoietic cell transplantation, comprising orally administering to the patient a prophylactically effective amount of a topically active corticosteroid for a period of time following allogenic hematopoietic cell transplantation and *prior to the presentation of symptoms associated with graft-versus-host disease.* (emphasis added) ('731 Patent, claim 1)

Clearly, one of the claimed limitations from the first independent claim of the '731 patent is directly related to the timing of the prophylactic use of BDP in an effort to prevent GVHD. As a result, according to claim 1, BDP must be administered prior to the appearance of symptoms associated with GVHD. Claim 1 of the present invention, on the other hand, reads on using BDP to treat a human patient with cancer by administering an effective amount of BDP to prevent or reduce symptoms of GVHD. Obviously, the use of BDP to reduce symptoms of GVHD was not a limitation found in claim 1 of the '731 patent. Claim 1 of the '731 patent was meant to be administered during a specific time in the progression of the disease state of the individual. Claim 1 of the present invention hardly reads on the same limitation, as it is also being used on a divergent patient population. The present invention involves use of BDP to treat cancer patients. As such, Examiner is respectfully requested to reconsider the double patenting rejection as

it pertains to claim 1 of both the '731 patent and the present invention. Applicant respectfully submits the claims are indeed patentably distinguishable from one another based on the respective limitations of both claims.

Examiner also argues the claimed invention is obvious over the claims of the issued patent, as exemplified by the specific use of the corticosteroid beclomethasone in claims 13-27, 39 and 40 of the '731 patent. Applicant has discussed the distinctions above. There are limitations in the '731 patent which are non-existent in the present claims. One skilled in the art would not be motivated to use BDP to treat a cancer patient by reducing symptoms of GVHD and maintaining GVL reaction. Nothing is suggested or taught in the '731 patent implicating BDP in this manner. In fact, the claims of the '731 patent involve a definitive time of administration of BDP which is not considered in the present invention. Furthermore, the population groups are distinct between the two inventions. The claims as presently amended take into account the mechanism of action, the timing of administration and the involvement of the GVL reaction, all of which are distinctive and non-obvious in light of the '731 patent.

The claims as currently recited are now patentably distinct from the '731 patent.

The claims in the present application now read on: a distinct mechanism of action (consideration of the GVL reaction); a different timing of administration (after symptoms of GVHD appear); a separate disease state (a

patient with cancer); and a dissimilar methodology for administration (treatment as opposed to prophylactic).

Applicant respectfully submits the claims as presently presented are distinct from the '731 patent claims as to result in a patentably distinct invention. Applicant respectfully requests Examiner withdraw the double patenting rejection.

IV. Rejection under 35 U.S.C. §103: McDonald et al. and Storb et al.

As discussed during the Interview, the proposed amendments relating to "at least two oral dosage forms" would obviate the §103 rejection, as such dosing was neither mentioned nor considered in McDonald et al.

There is proper support for the present claim amendments relating to dosing, as mentioned supra, at paragraph [0022], page 8.

Examiner finds it would have been obvious to one skilled in the art to treat patients having GVHD by BDP administration because the McDonald reference teaches the same. Moreover, Examiner finds that since the treatment is being administered to the same population involving the same compound, it would maintain the GVL reaction as claimed. However, Applicant respectfully submits it is at this point where the present invention is distinguishable over the prior art. Not only is the mechanism of action different (the dosing being capable of maintaining a GVL reaction) but the populations are certainly distinct (the

present invention is a method of treating cancer patients). Furthermore, the purpose behind this administration of BDP is to eliminate or reduce the number of cancer cells, not to treat or prevent GvHD, which is the theory behind the McDonald reference. This is one of the limitations of the claimed invention (see claim 1), thus distinguishable from non-cancer patients. The results presented would not have been expected in view of McDonald et al. because said reference focuses solely on a separate and distinct patient population. In fact, McDonald et al. is an actual description of a randomized, controlled trial which aimed to focus on patients with specific needs necessary to meet the predicted clinical endpoint. As a result, there would be no motivation by one skilled in the relevant art to use BDP in an effort to treat cancer patients. Moreover, there is no teaching or suggestion in McDonald et al. to use BDP in an attempt to control a GVL reaction that accompanies bone marrow transplantation. The effect on GVHD in the present invention is an afterthought to what the precise mode of action is as depicted in the claims.

Examiner even states that the reference fails to disclose anything "about maintaining GVL reaction effective to eliminate or reduce the number of cancer cells in the blood..." (Paper mailed 2/17/06, page 5) Examiner assumes that "when the symptoms are reduced GVL would be maintained." (Id.), thus justifying a finding of obviousness. However, under 35 U.S.C. §103, it is improper for Examiner to use impermissible hindsight in finding that something not considered in the prior art would later be found to be obvious after having the benefit of later discoveries. McDonald et al. never considered use of BDP

for treatment of cancer patients. Maintaining a GVL reaction in GVHD patients was never mentioned nor considered in the cited prior art. McDonald is considered a leading expert in the field of GVHD and the various modes of actions of the disease state. Thus, it would have likely been suggested in the reference that such a treatment regimen could benefit cancer patients. It was not known at the time of the McDonald reference that such a treatment would be effective on cancer patients. The McDonald reference was limited to a distinct patient population with separate phenotypes of the disease relative to those which would be treated with the present invention.

Examiner states that it would have been obvious to one skilled in the art at the time of invention to treat patients having GVHD with BDP. Applicant respectfully submits that the present invention is not to be used as a treatment for patients suffering from GVHD. The claimed invention focuses on treatment of cancer patients. The patients having some form of cancer would be a prerequisite to the claimed method of treatment, as required by the limitation present in claim 1. The present invention is not simply using BDP to treat GVHD patients. The claims reflect further limitations as a result of the present amendments to the claims.

There is no evidence that at the time of the McDonald reference (1998), it would have been obvious to one skilled in the art to use BDP to treat cancer patients. The maintenance of the GVL reaction was not mentioned in the McDonald reference and, as it is now a functional limitation of the present invention, such maintenance

distinguishes the present invention from the prior art of record.

Examiner states, in the Paper mailed February 17, 2006, "[i]f applicants have found the specific does, condition or any other criticality, claims do not reflect that at all." Paper mailed 2/17/2006, pages 5-6. Applicant respectfully asserts that the claims, as currently amended, now reflect the unique dosing regimen of BDP in cancer patients.

Examiner additionally cites Storb et al. to further support the §103 rejection. However, Applicant submits this reference teaches away from that proposed in the present application. Storb, at page 232, explicitly states that "GvHD exhibited an anti-leukemic effect" and that "[c]urrent clinical trials are attempting to manipulate GvHD and exploit its possible antileukemic effect in patients". The above would leave one skilled in the art to presume that treating or preventing GvHD would remove the supposed beneficial impact of the antileukemic effect, thereby leaving patients in a worsened state. The present invention, on the other hand, proposes to treat the cancers of the blood by a dosing regimen of BDP, which would have the consequence of treating GvHD, something which would certainly have the opposite teaching of that proposed in Storb et al. One skilled in the art, after reviewing Storb et al., would not be motivated to combine McDonald with Storb because they teach opposing principles. Furthermore, Storb teaches away from that proposed in the present application.

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Applicant respectfully requests withdrawal of the above identified rejections and allowance of the present application based on Applicant's arguments and amendments. If there are any questions or comments, Applicant's attorney may be reached at the telephone number state below.

Respectfully submitted,

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